

Sustainable Innovation

Topics on Open Innovation Seminar

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Influences on My Perspective

Academic

Computer science
• UCLA
• Stanford
• early networking research
Advisory Boards

Entrepreneurial

• Bridge
Communications
• NCD
• Precept
• Packet Design, LLC
• Mother!

Corporate

• CTO Cisco
Board member
• FedEx (current)
• Rockwell
• Sun Microsystems
• Disney (current)

Author - *Closing the Innovation Gap*, McGraw-Hill, 2008
Over 100 interviews with innovators, leaders, educators

Innovation is Not Just a Soundbite

- Innovation drives economic growth, quality of life and is the only hope of addressing the major challenges that we face - it is also very personal, impacting our lives in and out of the office
- Innovation doesn't just happen, it needs to be nurtured
- We have become shortsighted at all levels of society, creating an innovation deficit which will impact future generations



Different Types of Innovation

1 Breakthrough Innovation

Invention of something completely new
(transistor, credit card)

2 Incremental Innovation

Enhancement of current product or process
(higher performance system, private labeled credit card)

3 Orthogonal Innovation

Combination of existing innovations for use in a completely new way (iPod, debit card, Better Place)

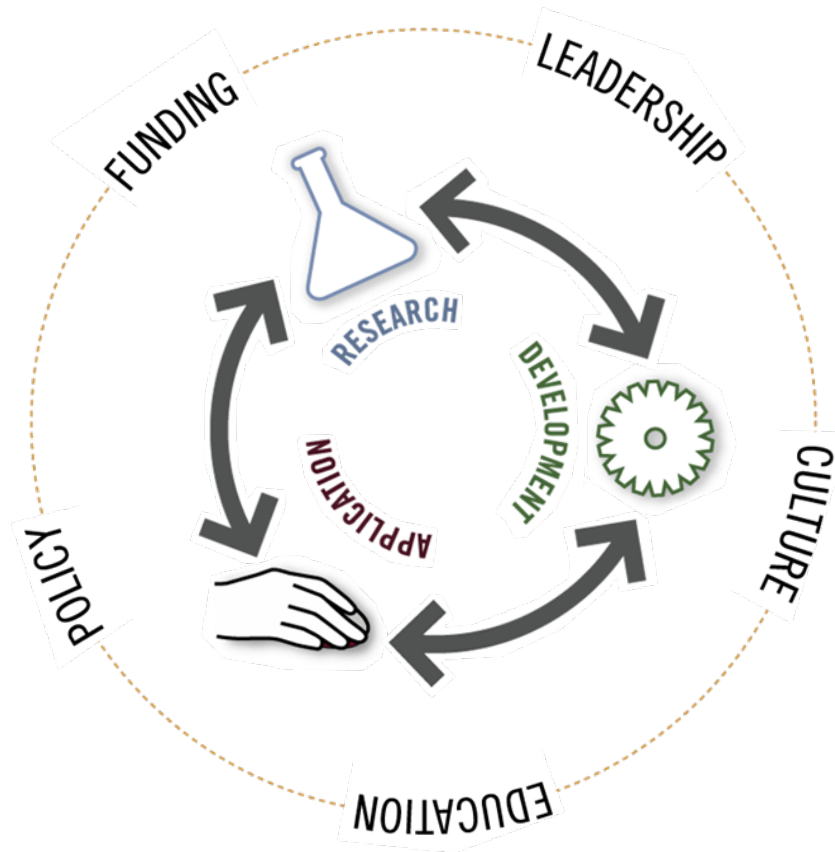
- 1 & 3 can be “disruptive” creating new markets and industries**
2 is necessary, just not sufficient
Only incremental innovation is “customer” driven
All are “need” driven

Innovation is Messy

- Innovation is iterative
- You need to be willing to invest without knowing the outcome
- Innovation builds on innovation
- Talent is critical - skill, aptitude, passion, drive
- Small teams of diverse perspectives (“no larger than a jazz band”)
- Effective collaboration requires internal talent



Ecosystem For Sustainable Innovation



Ecosystems must be in balance to sustain life

Core Values = Capacity for Change

Questioning

Curiosity, self-assessment, non-judgmental, free flowing

Risk

Vulnerability, attitude toward failure, fail early, learn from failure

Openness

To imagine, new data, sharing, surprise, change

Patience

Tenacity, patient capital

Trust

In oneself, in others, safety net (bankruptcy, healthcare, education)

Values need to be in balance.

Innovation Killers

- Tight process and structure can block innovation
- Many forces work against core values
 - Scarcity of resources - too much competition
 - ROI hurdles
 - Silos
 - Incentive systems
 - Lack of trust (safety net)
 - Commercial secrecy or classification
 - Uniformity (vs. fairness)
- Enemies of innovation also show up at national level – education policy, labor issues, regulation

Green Thumb Leadership



- Plan and organize around three horizons: continuous improvement, next generation and future growth
- Ongoing businesses are like factory farms - tight metrics are critical to success, surprises are not welcome
- Innovation at scale can work for process innovation and incremental innovation
- Leading disruptive innovation is like gardening, requiring a “green thumb” - vision, judgment, instinct, dealing with ambiguity and patience
- For more disruptive innovation create gardens or greenhouses (internal or external) that are loosely connected to mainstream business - where you can “safely” learn from failure
- Key challenge is determining when and how to transplant

New Drivers of Innovation

- **Recent past:**
 - Productivity (IT),
 - Illness (Medicine/Medtech)
- **Future:**
 - Disruption of current industries - focus on individuals (social, education, commerce, entertainment)
 - Energy/Environment
 - Healthcare (expanding to include wellness, delivery of care...)
- Complex, interdisciplinary problems

Reigniting Innovation

- Innovation in development, services *and* manufacturing - focus on building and creating not just trading
- Regain balance of ecosystem and core values!
- Different tools for different industries - innovating in the consumer internet space is very different than bio-tech or clean-tech
- New models of collaboration in government, business, academia and non-profits: research funding and collaboration, job creation, education/retraining
- Silos everywhere hinder our ability to address the problems we face - communities, fields of expertise, generations, political, geographic, cultural
- Need deep experts, “T people”, double Ts and connectors

Fear Works Against Change

- **Threats should be turned into challenges which inspire involvement - not fear and helplessness**
- **Challenges such as energy dependence/climate change, healthcare, security are all opportunities for innovation that can drive the economy**
- **During hard economic times need to be smart about where to cut and where investment is critical - at personal, organizational and national level**
- **Not everyone wants to, or can be, a leader of other people, but each of us is our own leader - responsible for our path**



**We each have a role to play!
Courage, commitment,
collaboration, core values.....**

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